

Work Order ID 74327

Page 1

Wednesday, September 28, 2011 1:19:12 PM

Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 9/28/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 10/7/2011 Req'd Qty: 1.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

M.L.J.

Date: 11/09/28 Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D3274

D

IIN-D206-642

Rev M

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D206-642-541

CHG003

1/A

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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110

0.00



Skidtubes

Skidtubes

Skidtubes

Memo

0.00

****VERIFY AND INSPECT THE MATERIAL PRIOR TO USE****

1- Bend FWD end of tube using bend prog D3274 FWD and foil 10 as per dwg D3274, cut fwd end of tube with saw table setup D3274.

2- remove fwd indexing ridge as per dwg D3274. Prepare for welding

3- weld fwd cap as per dwg D3274 and QS1004
AR Aluminum Rod Batch: M119785

4- grind fwd cap weld on top surface only

5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.

6-Drill Aft cap pilot hole using DT8025

7 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D.
Drill 3/16" pilot holes as per Dwg D32748 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe
batch #

9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

12-01-13

12/01/27

12-01-30

12/02/013

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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114

QC5- Inspect part completeness to step on W/O

0.00

8/26/14



QC

Memo

0.00

Quality Control

116

QC10- Inspect visual per QSI004- ground welds

0.00

8/26/14



QC

Memo

0.00

Quality Control

120

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

8/26/14

W/O:		WORK ORDER CHANGES					
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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130

QC- Inspect Part Finish

0.00



QC 7

0.00

QC

Memo

Quality Control

1
SAD 12-02-14
PTO

150

Skidtubes

0.00



0.00

Skidtubes

Memo

Skidtubes

1-Open Ø0.313" and 0.375" crossbolt spacer holes as per Dwg D3274



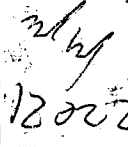
2-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube

3-Bond web in place as per Dwg D3274 & QSI 015.

A/R ☐ Sikaflex-291 ☐ 119 999 ☐Sikaflex expire date: ☐ 12/08/13 ☐Start: ☐ 12/02/14 ☐ Time: ☐ 5:10 ☐Finish: ☐ 12/03/14 ☐ Time: ☐ 12:30 ☐

(Adhere for 12 hours)

> BB 12/02/14
DC 12/02/14

W/O: 74327		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
12-02-14	130	change Qc3 to Q7					 12-02-2014

Part No: D206-642-541 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start
Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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160

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

DP 12-2-15

170

Skidtubes

0.00



Skidtubes

Memo

0.00

Skidtubes

1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position.

2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2
OPEN HOLES TO .297" . Debur3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD
END OF TUBE
DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES)
REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES

4- Countersink crossbolt spacer holes as per Dwg D3274

5- prepare for welding

SAD 12-02-15

SAD 12-02-16

W/O:		WORK ORDER CHANGES					
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Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

180

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

4.7°
3.1"

1 0 BB 12/02/16

190

Skidtubes

0.00



Skidtubes

Memo

0.00

Skidtubes

1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod
A/R ☐ Aluminum Rod ☒ m119785

BB 12/02/16

3-Grind cross bolt welds flush as per Dwg D3274.

SAD 12-02-16

4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 and deburr.

-D 12-2-21

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
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Wednesday, September 28, 2011 1:19:12 PM

[illegible][illegible][illegible][illegible]

10/10/2010

Reference:



SPC (Y/N): _____ Date: _____

**Insp.
Stamp**

[illegible]

0.00

12. 02. 21 (1)

1. The first step is to identify the problem. This involves understanding the current situation and what needs to be changed.

0.00

Pl 12.02.21

1x 0



0.00

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch

1 JP Feb. 22/2012

W/O:		WORK ORDER CHANGES					
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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230

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Powder Coating

Memo

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

10-30
3200 F
11-00

0.00

1 X of M-12/02/22

240

QC3- Inspect Part Finish

0.00



QC

Quality Control

Memo

0.00

1 of M 12/02/23

250

HandFinishing

0.00



HandFinish

Hand Finishing

Memo

0.00

✓ 1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets.
A/R ☐ SikaFlex-291 ☐ M114596

2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a
A/R ☐ SikaFlex-291 ☐ M114598
Sikaflex expire date: ☐ 12/08

1 of M 12/02/27

W/O:		WORK ORDER CHANGES					
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

260

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

Inspect Nut Plate & Inserts

1 BR 12-2-23

270

HAND FINISHING RESOURCE #1

0.00



HandFinish

Memo

0.00

Hand Finishing

1-Install wearpads & gaskets as per Dwg D3274.

2-Install ring as per Dwg D3274

A/R ☐ Sikaflex-291 ☐ 11119508Sikaflex expire date: ☐ 12108

3-Inspect for foreign objects as per QSI 024

4-Spray inside of tube on both sides of web with LPS-3

A/R LPS-3 Batch: 101A

5-Install Aft Cap and seal with Sikaflex. Clean excess adhesive.

A/R ☐ Sikaflex-291 ☐ 11119508Sikaflex expire date: ☐ 12108

1 of 12/10/12

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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280

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

1 BR 12-2-23

290

Identify as per dwg & Stock Location: _____

0.00



Packaging

Memo

0.00

Packaging

PPP 74319 (1x) SP 12-02-24

300

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

12/2/24 JF
MA
12-02-24

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

Wędnnesday, September 28, 2011 1:19:21 PM

1. The first step is to identify the problem. This involves understanding the current situation and what needs to be changed.

2. The second step is to set goals. These should be specific, measurable, achievable, relevant, and time-bound.

3. The third step is to develop a plan. This involves determining the steps that need to be taken to achieve the goals.




4. The fourth step is to implement the plan. This involves putting the plan into action and monitoring progress.

5. The fifth step is to evaluate the results. This involves assessing whether the goals have been achieved and what lessons can be learned.

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Required Qty: 1.00

Comments:	IPP Rev:B 05-09-23	Revised per D206-642 Rev. J	KJ/JLM
	IPP Rev:C 07-02-23	Added SS Wearplates & Gaskets	JLM
	IPP Rev:D 07-12-06	replace NAS1515H3L to D3672-1	DD
	IPP Rev:E 08-04-17	as per PAR 08-015	DD verified by:EC
	IPP Rev:F 08-06-02	add comment	DD verified by:EC
	IPP Rev:G 08-10-09	revise details	DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-1-190  Extrusion Round 3" 206		Manufactured	No			110	Each	68.4000	1	1			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				HALL		68.4							
					59874	10.4							
					69622	58							
D3285-1  Cap		Manufactured	No			110	Each	87.0000	1	1			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG002		87							
					52511	40							
					52647	47							
D3282-041  Float Web (206L/407)		Manufactured	No			150	Each	1.0000	1	1			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG		1							
					70050	1							

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, September 28, 2011 1:19:21 PM

Work Order ID: 74327

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 9/28/2011

Required Date: 10/7/2011

Start Qty: 1.00

Required Qty: 1.00

D2649

Manufactured No

190

Each

1,959.000

12

12



Cross Bolt Spacer



BE 12/02/11
B 78019 #12

Location

Loc Qty

Loc Code

LG

736

68224

2

71355

2

72704

2

72841

130

73855

600

LG001

1223

65317

1

68507

11

73390

35

73857

576

73860

600

D3275-1

Manufactured No

190

Each

296.0000

12

12



Crossbolt Spacer



BE 12/02/11

Location

Loc Qty

Loc Code

LG

30

72123

30

LG002

266

66930

106

73393

160

12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, September 28, 2011 1:19:22 PM

Work Order ID: 74327

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 9/28/2011

Required Date: 10/7/2011

Start Qty: 1.00

Required Qty: 1.00

CR3212-4-03

Purchased

No

250

Each

2,114.000

2

2



Cherry Rivet



SAD 12-02-16

Location

Loc Qty

Loc Code

FP-B

2

110139

2

ST311

1112

114859

1112

ST318

1000

119017

1000

2

D3415-041

Manufactured

No

250

Each

44.0000

1

1



Nut Plate



SAD 12-02-16

Location

Loc Qty

Loc Code

ST053

44

67605

44

2

CCR264SS3-3

Purchased

No

250

Each

1,399.000

2

2



Cherry Rivet



SAD 12-02-16

Location

Loc Qty

Loc Code

FP-B

2

113973

2

ST311

397

117086

19

117849

378

ST317

1000

119017

1000

2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, September 28, 2011 1:19:22 PM

Work Order ID: 74327

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 9/28/2011

Required Date: 10/7/2011

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-130

Purchased

No

250

Each

348.0000

78

78



M120410 (x78) MU 12/02/23

Insert

Location

Loc Qty

Loc Code

ST281

288

118386

288

ST282

60

117717

10

118237

48

118312

2

D3536-15

Manufactured

No

270

Each

16.0000

1

1



B73318 (x1) MU 12/02/23

Gasket

Location

Loc Qty

Loc Code

FP011

16

71586

13

72881

3

D3536-23

Manufactured

No

270

Each

12.0000

1

1



B73312 (x1) MU 12/02/23

Gasket

Location

Loc Qty

Loc Code

FP011

12

43406

1

71579

11

D3536-35

Manufactured

No

270

Each

15.0000

1

1



B74511 (x1) MU 12/02/23

Gasket

Location

Loc Qty

Loc Code

FP012

15

71587

6

72882

9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, September 28, 2011 1:19:22 PM

Work Order ID: 74327

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 9/28/2011

Required Date: 10/7/2011

Start Qty: 1.00

Required Qty: 1.00

D3536-39

Manufactured No

270 Each

14.0000

1

1



Gasket

Location

Loc Qty

Loc Code

FP015

14

69760

14

D3535-15

Manufactured No

270 Each

28.0000

1

1



Wearshoe

Location

Loc Qty

Loc Code

FP007

25

73006

12

73315

13

FP018

3

69931

3

D3535-35

Manufactured No

270 Each

30.0000

1

1



Wearshoe

Location

Loc Qty

Loc Code

FP018

30

67598

1

70815

3

73311

26

D3535-39

Manufactured No

270 Each

33.0000

1

1



Wearshoe

Location

Loc Qty

Loc Code

FP018

33

69759

1

72159

12

73316

20

Wednesday, September 28, 2011 1:19:22 PM

Shop Packet Print

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, September 28, 2011 1:19:22 PM

Work Order ID: 74327

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 9/28/2011

Required Date: 10/7/2011

Start Qty: 1.00

Required Qty: 1.00

D3535-23

Manufactured No

270

Each

38.0000

1

1



Wearshoe



38 12/02/23

Location

Loc Qty

Loc Code

FP021

38

70818

2

71581

10

73314

26

x1

D3537-3

Manufactured No

270

Each

33.0000

1

1



Wearpad



374500 (x1) 38 12/02/23

Location

Loc Qty

Loc Code

FP

4

70481

4

FP002

14

73305

14

FP017

15

35697

1

72144

10

72686

4

D3537-1

Manufactured No

270

Each

168.0000

9

9



Wearpad



378592 (x1) 38 12/02/23

Location

Loc Qty

Loc Code

FP001

161

72124

41

73394

60

73395

60

FP017

7

69817

5

70686

2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, September 28, 2011 1:19:22 PM

Work Order ID: 74327



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 9/28/2011

Required Date: 10/7/2011

Start Qty: 1.00

Required Qty: 1.00

AN960C10L NAS1149C0332 Purchased No

270 Each 0.0000 80 80



washer



M120648 (x80) M12/02/23

AN960C416 NAS1149C0463 Purchased No

270 Each 0.0000 1 1



washer



M117735 (x1) M12/02/23

D3672-1 Manufactured No

270 Each 1,062.000 2 2



M12/02/23

Phenolic Washer

Location

Loc Qty

Loc Code

ST074

1060

64177

86

66821

474

72229

500

X2

ST077

2

52505

2

AN3C4A Purchased No

270 Each 2,728.000 80 80



M120423 (x80) M12/02/23

BOLT

Location

Loc Qty

Loc Code

ST350

2728

117313

2

117688

5

117872

22

118112

16

118451

953

118706

500

118838

1000

118983

230

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 8

Wednesday, September 28, 2011 1:19:22 PM

Work Order ID: 74327



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 9/28/2011

Required Date: 10/7/2011

Start Qty: 1.00

Required Qty: 1.00

AN4C5A

Purchased

No

270

Each

581.0000

1

1



BOLT



Jul 12/02/27

Location

Loc Qty

Loc Code

FP-B

92

112243

92

X1

ST345

389

112243

389

ST356

100

119017

100

D2646

Manufactured

No

270

Each

85.0000

1

1



Aft Cap



B-8825(x1) Jul 12/02/27

Location

Loc Qty

Loc Code

FP004

42

68280

42

FP006

5

62678

5

FP-4

34

70945

1

71070

33

fp5

4

71038

4

Wednesday, September 28, 2011 1:19:22 PM

Shop Packet Print

Page 8

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 9

Wednesday, September 28, 2011 1:19:22 PM

Work Order ID: 74327



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 9/28/2011

Required Date: 10/7/2011

Start Qty: 1.00

Required Qty: 1.00

D3413-1

Manufactured No

270

Each

57.0000

1

1



Ring



37794048 M n 102/37

Location

Loc Qty

Loc Code

ST420

17

66387

1

70773

16

ST467

40

72137

20

73298

20

Wednesday, September 28, 2011 1:19:22 PM

Shop Packet Print

Page 9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

RELEASED

07.02.12

DEO ATTACHED

DESIGN CP	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. D3274	REV. D SHEET 1 OF 4
DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY	SCALE NTS
A	04.03.15	NEW ISSUE	
B	04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76	
C	05.03.16	ADD -043; NEW INSERTS	
D	06.12.19	NEW INSERTS, SS WEARSHOE + GASKET	

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE
1	1	D3535-23	WEARSHOE
1	1	D3535-35	WEARSHOE
1	1	D3535-39	WEARSHOE
1	1	D3536-15	GASKET
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

GENERAL NOTES:

1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
3. ALL HOLES DRILLED ON CENTERLINES.
4. BOND D3282-041 FLOAT WEB INTO D3274-1/-3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
5. WELDING TO BE DONE PER DART QSI 004.
6. FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291.
8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

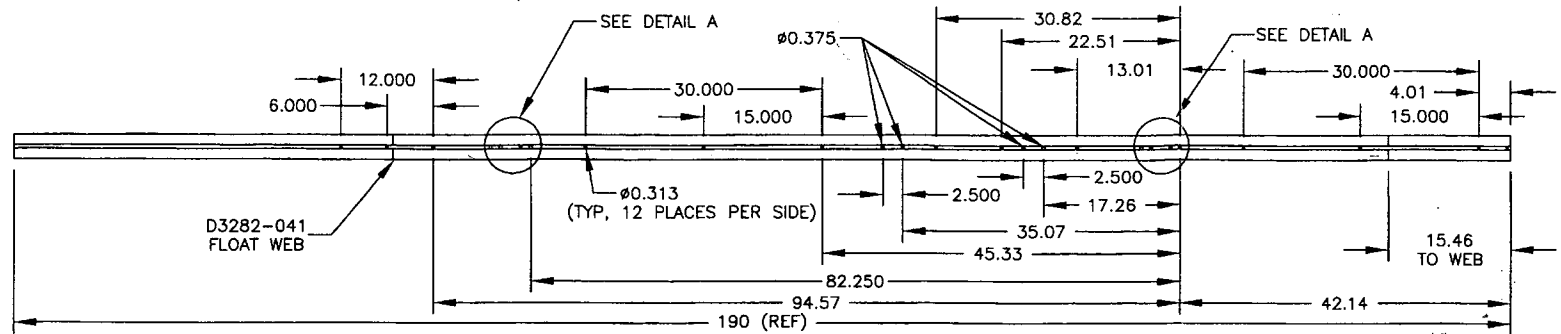
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

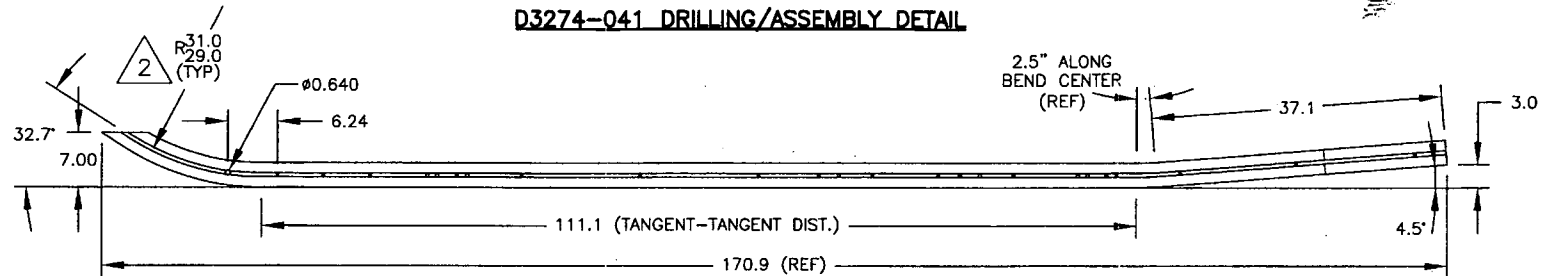
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

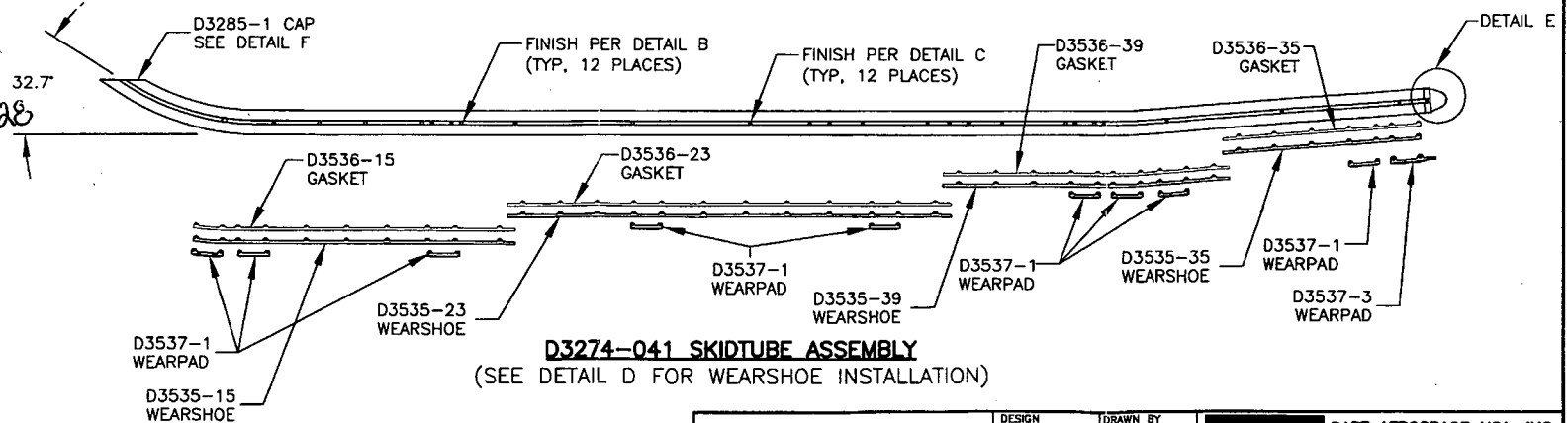
DEO ATTACHED



D3274-041 DRILLING/ASSEMBLY DETAIL



D3274-041 BEND/DRILLING DETAIL



D3274-041 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 74327
M.L.J
11/09/28

RELEASED

07.02.12

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DESIGN

CP

DRAWN BY

PH

CHECKED

APPROVED

DATE

06.12.19

DART DART AEROSPACE USA, INC.
PORT HADLOCK, MA

DRAWING NO.

D3274

REV. D

TITLE

SKIDTUBE ASSEMBLY

SHEET 2 OF 4

SCALE
1:15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

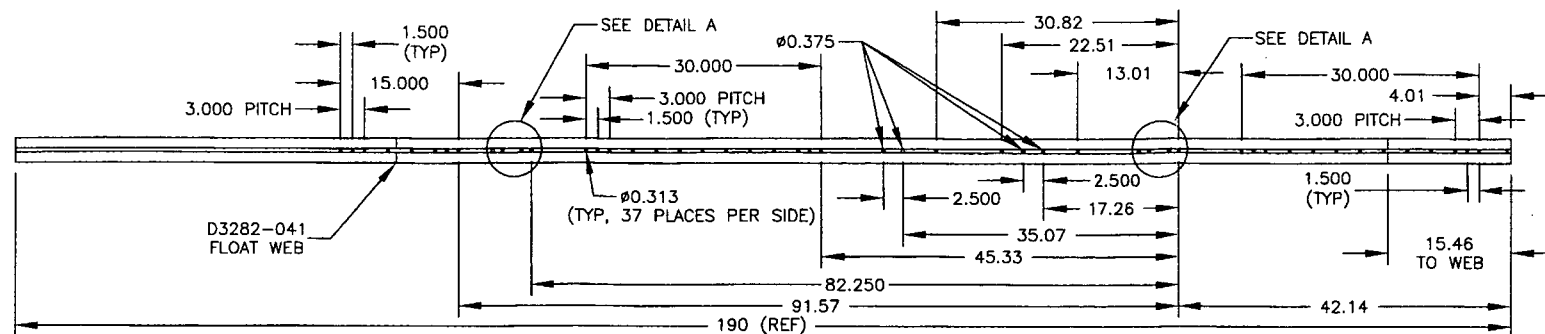
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

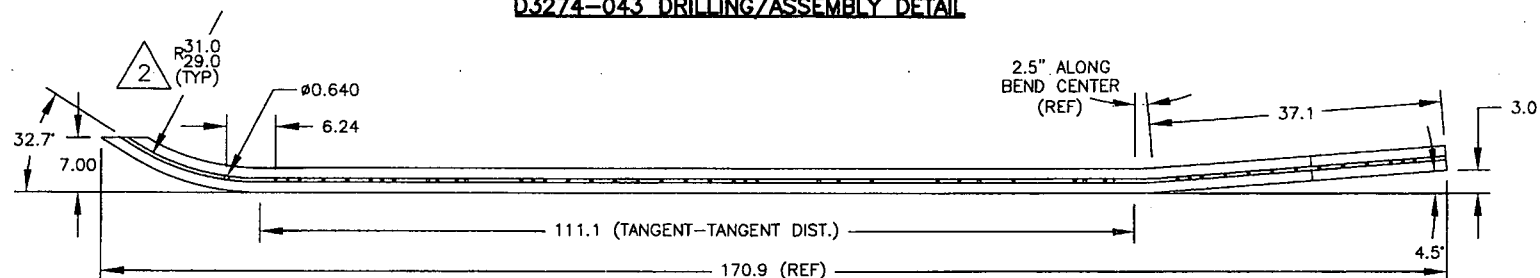
NOTE: Date & initial all entries

74327

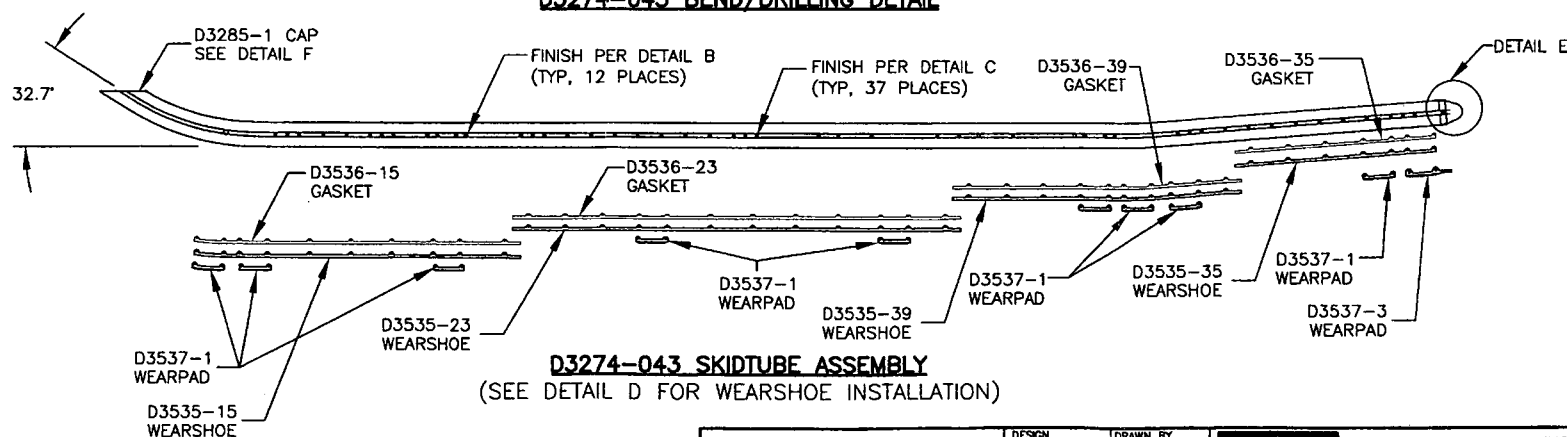
DEO ATTACHED



D3274-043 DRILLING/ASSEMBLY DETAIL



D3274-043 BEND/DRILLING DETAIL



D3274-043 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

RELEASED

07.02.12

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CHECKED	APPROVED	CP	PH	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.		DATE	DRAWING NO.	
		06.12.19	D3274	
		TITLE		REV. D
		SKIDTUBE ASSEMBLY		SHEET 3 OF 4
				SCALE
				1:15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

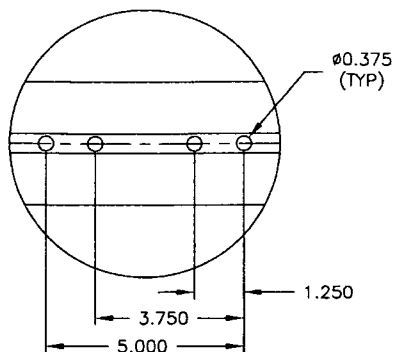
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

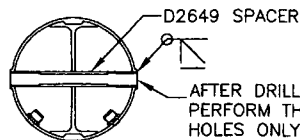
NOTE: Date & initial all entries

74327

DETAIL A: DRILL DETAIL

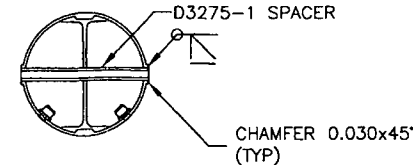


DETAIL B FOR 0.375 HOLES ONLY

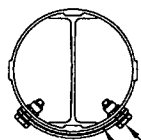


- AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR 0.375
HOLES ONLY:
1. CHAMFER HOLE 0.030x45°
 2. INSERT D2649 SPACER
 3. WELD INTO PLACE AND GRIND FLUSH
 4. C'BORE TO 0.313x0.75 DEEP

DETAIL C FOR 0.313 HOLES ONLY

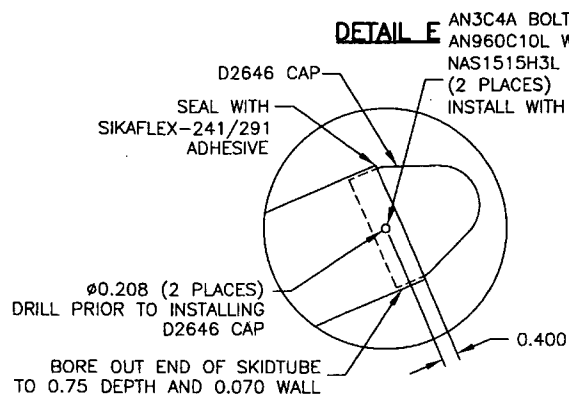


DETAIL D

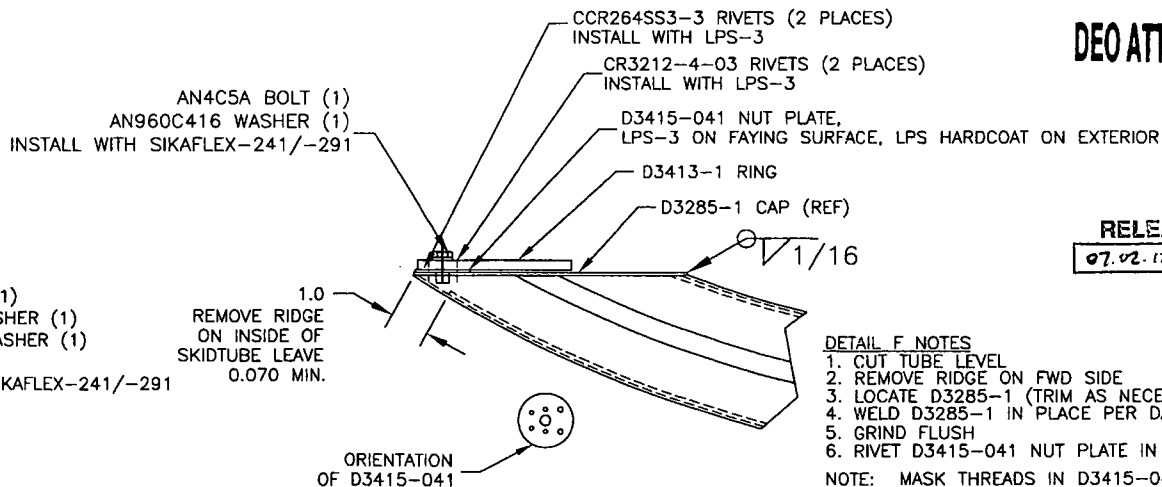


- ALS7-1032-130 INSERT (1)
AN3C4A BOLT (1)
AN960C10L WASHER (1)
(73 PLACES)
GASKET/WEARSHOE/WEARPAD (REF)

DETAIL E



DETAIL F: END FINISHING DETAIL



DEO ATTACHED

RELEASED

07.02.12

DETAIL F NOTES

1. CUT TUBE LEVEL
 2. REMOVE RIDGE ON FWD SIDE
 3. LOCATE D3285-1 (TRIM AS NECESSARY)
 4. WELD D3285-1 IN PLACE PER DART QSI 004
 5. GRIND FLUSH
 6. RIVET D3415-041 NUT PLATE IN PLACE
- NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

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		DATE	06.12.19	TITLE		SKIDTUBE ASSEMBLY	SCALE 1:3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

74327

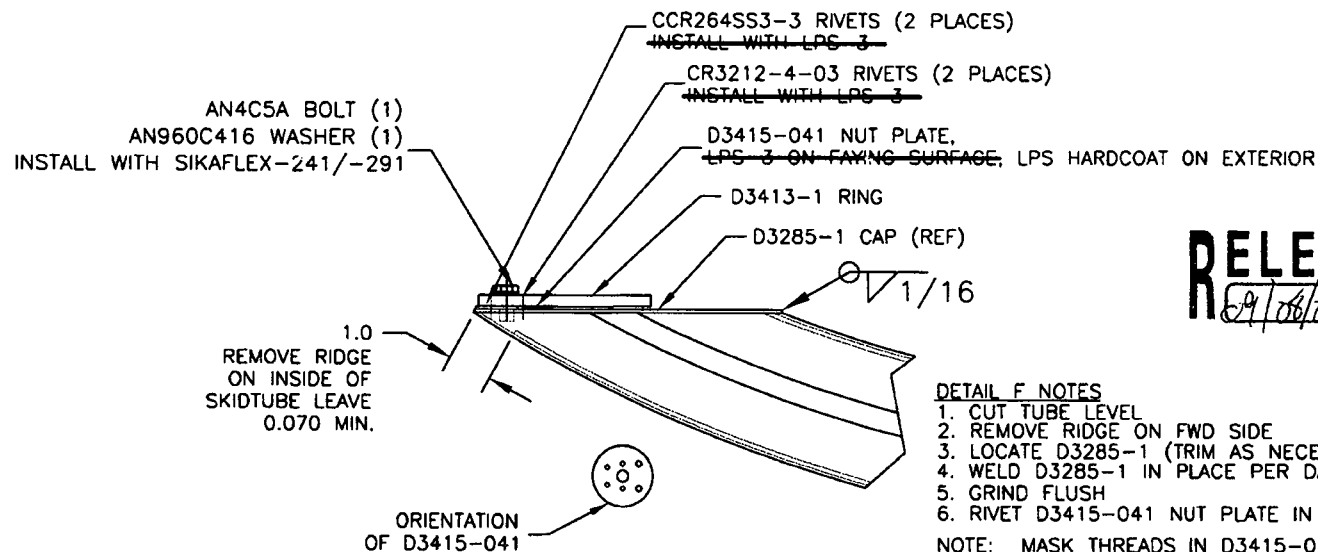
DRAWING NO. D3274	TITLE SKIDTUBE ASSEMBLY	REV. D	DART AEROSPACE USA, INC	D.E.O. NO. D3274-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>[Signature]</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DE APPR. <i>[Signature]</i>		
DATE 09.06.17	DATE 09.06.23	DATE 09/06/23	DATE 09/06/23	DATE 09/06/23	DATE 09.06.23	

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: ~~"SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS 3' AFTER FINISH AND INSTALLATION OF INSERTS.~~
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER."

AMEND DETAIL F AS SHOWN:

DETAIL F: END FINISHING DETAIL



DETAIL F NOTES

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries